

Claims

There is claimed:

1. A hinge connector assembly for rotatably connecting an earpiece to a frame of glasses, comprising:

5 a hinge connector adapted to be located against a first face of said earpiece at a proximal end thereof;

a hinge element attached to the hinge connector and adapted for rotative connection to a corresponding hinge element attached to said frame;

• a connector clamp adapted to be located against a second face opposite said first face of said earpiece at said proximal end;

10 said hinge connector including at least one receiving notch and said clamp including at least one protruding tab adapted to engage said notches when said proximal end of said earpiece is located between said connector and said clamp; and

connecting means for securing said hinge connector to said connector clamp with the proximal end of the earpiece therebetween.

2. The hinge connector assembly of claim 1, wherein said hinge connector comprises an end wall adapted to be located against a front end of said proximal end of said earpiece.

• 3. The hinge connector assembly of claim 1, wherein said earpiece has a depression at said proximal end and said hinge connector has an interior ridge adapted to mate with said depression.

20 4. The hinge connector assembly of claim 1, wherein said connector clamp has a pair of spaced protruding tabs and said hinge connector has a pair of spaced notches, said tabs being adapted to engage said notches around different sides of said proximal end of said earpiece.

5. The hinge connector assembly of claim 1, wherein said connecting means includes a pair of bolt members and the hinge connector has a pair of apertures, wherein said bolt members secure said hinge connector to said connector clamp through said pair of apertures.

5 6. The hinge connector assembly of claim 1, wherein said connecting means includes a bolt member securing said hinge connector to said connector clamp.

7. The hinge connector assembly of claim 6, wherein said connector clamp further comprises a threaded bore for receiving said bolt.

8. The hinge connector assembly of claim 7, wherein said connector clamp
10 includes a tongue, said tongue accommodating said threaded bore for receiving said bolt.

9. The hinge connector assembly of claim 8, wherein said proximal end of said earpiece includes a pair of apertures, and said tongue includes a pair of threaded bores for receiving a pair of bolts, said bolts passing into said apertures in said earpiece.

15 10. The hinge connector assembly of claim 9, wherein said earpiece includes a skeletal structure disposed in said earpiece.

11. The hinge connector assembly of claim 10, wherein said skeletal structure has one or more openings and said bolts pas through said openings.

12. The hinge connector assembly of claim 11, wherein said skeletal
20 structure comprises a metallic rod.

13. The hinge connector assembly of claim 1, wherein said earpiece at said proximal end has an indent on an external face thereof and said connector clamp has a tongue adapted to engage said indent.

14. The hinge connector assembly of claim 13, wherein said tongue is
25 adapted to engage said indent so that an external face of said tongue is in non-protruding alignment with said external face of said earpiece.

15. The hinge connector assembly of claim 1, wherein said connector clamp comprises a plate, said plate being parallel to said second face when said clamp is engaged to said second face.

5 16. A hinge assembly for connecting a temple to a frame of a pair of eyeglasses, comprising:

a temple having a distal end and a proximal end and an internal support structure disposed within said temple;

a first plate located adjacent to an interior surface of said temple;

10 a first hinge portion attached to said first plate and adapted for linking at a central axis to a second hinge portion attached to said frame such that said frame and said temple are capable of rotative movement around said central axis;

a second plate located adjacent to an exterior surface of said temple that is opposite said interior surface;

15 a securing means for fastening said first plate to said second plate around said temple.

said first plate including a one or more receiving notches and said second plate including one or more tabs adapted to be introduced into said notches when said temple is located between said first plate and said second plate; and

20 wherein, said first plate and said second plate are located closer to said proximal end than to said distal end.

17. The assembly of claim 16, wherein said first plate further comprises a first hole and said temple has a second hole that is aligned with said first hole and said securing means includes a screw member that is inserted through said first hole and said second hole.

18. The apparatus of claim 17, wherein said second plate includes a threaded socket positioned in said second hole into which said screw member is further inserted for tightening said first plate and said second plate around said temple.

19. The apparatus of claim 16, wherein said temple includes a depression
5 having a length and a width dimension on said interior surface of said temple and said first plate includes a protruding ridge that has a corresponding length and width dimension allowing said ridge to be rest in said depression.

20. The apparatus of claim 16, wherein said temple includes an inset on said exterior surface of said temple having dimensions that correspond to said second plate
10 wherein said second plate rests in said inset.

21. The apparatus of claim 20, wherein an exterior surface of said second plate is substantially flush with said exterior surface of said temple.

22. A hinge assembly for connecting an earpiece to a frame on a pair of glasses comprising:

15 a hinge connector adapted to be located against a first face of said earpiece at a proximal end thereof;

a hinge element attached to the hinge connector and adapted for rotative connection to a corresponding hinge element attached to said frame;

20 a connector clamp adapted to be located against a second face opposite said first face of said earpiece at said proximal end;

said connector clamp including a one or more receiving notches and said hinge connector including one or more protruding tabs adapted to engage said notches when said proximal end of said earpiece is located between said connector and said clamp;
and

25 a connecting means for securing said hinge connector to said connector clamp with the proximal end of the earpiece therebetween.

23. The hinge connector assembly of claim 22, further comprising an end wall adapted to be located against a front end of said proximal end of said earpiece.

5 24. The hinge connector assembly of claim 23, wherein said end wall is attached to said hinge connector.

25. The hinge connector assembly of claim 23, wherein said end wall is attached to said connector clamp.

10 26. The hinge connector assembly of claim 22, wherein said earpiece has a depression at said proximal end and wherein said hinge connector has an interior ridge adapted to mate with said depression.

15 27. The hinge connector assembly of claim 22, wherein said hinge connector has a pair of spaced protruding tabs and said connector clamp has a pair of spaced notches, said tabs being adapted to engage said notches around different sides of said proximal end of said earpiece.

28. The hinge connector assembly of claim 22, wherein said connecting means includes a pair of bolt members that secure said connector clamp to said hinge connector through a pair of apertures located in said connector clamp.

20 29. The hinge connector assembly of claim 22, wherein said connecting means includes a bolt member securing said connector clamp to said hinge connector.

30. The hinge connector assembly of claim 29, wherein said hinge connector further comprises a threaded bore for receiving said bolt member.

25 31. The hinge connector assembly of claim 30, wherein said hinge connector includes a tongue, said tongue accommodating said threaded bore for receiving said bolt member.

32. The hinge connector assembly of claim 31, wherein said proximal end of said earpiece includes a pair of apertures, and said tongue includes a pair of threaded bores for receiving a pair of bolts members, said bolts member passing into said apertures in said earpiece.

5 33. The hinge connector assembly of claim 32, wherein said earpiece includes a skeletal structure disposed in said earpiece.

34. The hinge connector assembly of claim 33, wherein said skeletal structure has one or more openings and said bolts pas through said openings.

10 35. The hinge connector assembly of claim 34, wherein said skeletal structure comprises a metallic rod.

36. The hinge connector assembly of claim 22, wherein said earpiece at said proximal end has an indent on an external face thereof and said hinge connector has a tongue adapted to engage said indent.

15 37. The hinge connector assembly of claim 36, wherein said tongue is adapted to engage said indent so that an external face of said tongue is in non-protruding alignment with said external face of said earpiece.